SAMPLE PAPER 01 FOR SESSION ENDING EXAM (2017-18)

SUBJECT: MATHEMATICS

BLUE PRINT FOR SESSION ENDING EXAM: CLASS VIII

Unit/Topic	VSA (1 mark)	Short answer (2 marks)	Short answer (3 marks)	Long answer (4 marks)	Total
Linear equations in one variable	1(1)	--	1(3)	1(4)	**3(8)**
Squares and Square Roots	1(1)	2(4)	1(3)	--	**4(8)**
Comparing Quantities	1(1)	--	1(3)	1(4)	**3(8)**
Algebraic Expression	1(1)	--	2(6)	1(4)	**4(11)**
Visualizing Solid Shapes	1(1)	1(2)	1(3)	--	**3(6)**
Mensuration	--	--	2(6)	1(4)	**3(10)**
Exponents and Powers	1(1)	1(2)	1(3)	1(4)	**4(10)**
Direct and Inverse Proportion	--	1(2)	--	1(4)	**2(6)**
Factorisation	--	1(2)	--	1(4)	**2(6)**
Introduction to Graphs	--	--	--	1(4)	**1(4)**
Playing with Numbers	--	--	1(3)	--	**1(3)**
Total	**6(6)**	**6(12)**	**10(30)**	**8(32)**	**30(80)**

Note: Linear Equations in one variable, Squares & Square Roots and Comparing Quantities (30% i.e. 24 marks) of 1st term syllabus covering significant topics/chapters have taken as per CBSE guidelines.

MARKING SCHEME FOR SESSION ENDING EXAM

SECTION	MARKS	NO. OF QUESTIONS	TOTAL
VSA	1	6	08
SA – I	2	6	12
SA – II	3	10	30
LA	4	8	32
GRAND TOTAL			**80**

SAMPLE PAPER 01 FOR SESSION ENDING EXAM (2017-18)

SUBJECT: MATHEMATICS **MAX. MARKS : 80**

CLASS : VIII **DURATION : 3 HRS**

General Instructions:

(i). **All** questions are compulsory.

(ii). This question paper contains **30** questions divided into four Sections A, B, C and D.

(iii). **Section A** comprises of 6 questions of **1 mark** each. **Section B** comprises of 6 questions of **2 marks** each. **Section C** comprises of 10 questions of **3 marks** each and **Section D** comprises of 8 questions of **4 marks** each.

(iv). Use of Calculators is not permitted

SECTION – A

1. 72% of 25 students are good in mathematics. How many are not good in mathematics?

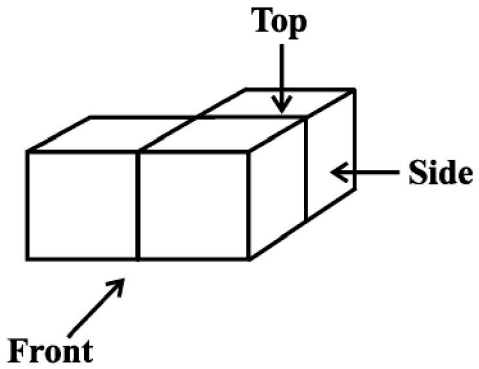
2. Find the solution of $2x - 3 = 7$.

3. Find the square of the number 32.

4. Find the product : $a^2(2ab - 5c)$

5. Find the value of $\left(6^{-1} - 8^{-1}\right)^{-1}$

6. Draw the top view of the given solid:



SECTION – B

7. 2025 plants are to be planted in a garden in such a way that each row contains as many plants as the number of rows. Find the number of rows and the number of plants in each row.

8. Find the smallest square number which is divisible by each of the numbers 6, 9 and 15.

9. Find m so that $(-3)^{m+1} \times (-3)^5 = (-3)^7$

10. An electric pole, 14 metres high, casts a shadow of 10 metres. Find the height of a tree that casts a shadow of 15 metres under similar conditions.

11. Factorise (i) $6xy - 4y + 6 - 9x$ (ii) $x^2 + x\,y + 8x + 8y$

12. Using Euler's formula find the unknown.

Faces	?	5
Vertices	6	?
Edges	12	9

SECTION – C

13. During a mass drill exercise, 6250 students of different schools are arranged in rows such that the number of students in each row is equal to the number of rows. In doing so, the instructor finds out that 9 children are left out. Find the number of children in each row of the square.

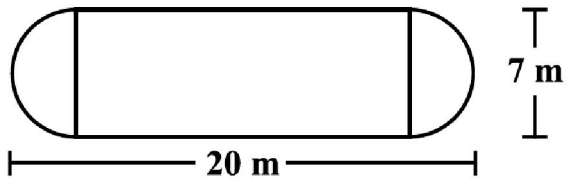
14. Solve: $\frac{x+1}{2x+3} = \frac{3}{8}$

15. The marked price of an article is Rs 500. The shopkeeper gives a discount of 5% and still makes a profit of 25%. Find the cost price of the article.

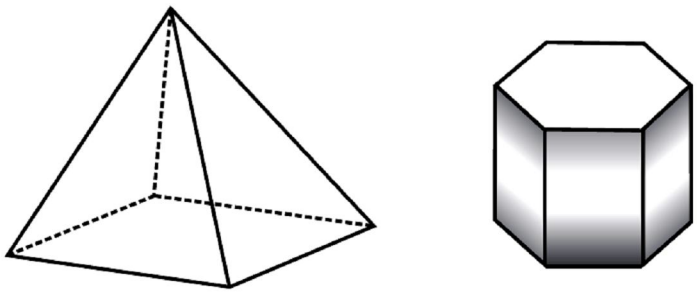
16. (a) Add: $p\,(p-q)$, $q\,(q-r)$ and $r\,(r-p)$
(b) Subtract: $3a\,(a+b+c) - 2\,b\,(a-b+c)$ from $4c\,(-a+b+c)$

17. Simplify: (i) $(x^2 - 5)(x + 5) + 25$ (ii) $(a^2 + 5)(b^3 + 3) + 5$

18. The shape of a garden is rectangular in the middle and semi circular at the ends as shown in the diagram. Find the area and the perimeter of this garden



19. Verify Euler's formula for these solids:



(i) (ii)

20. Simplify: $\frac{25 \times x^{-4}}{5^{-3} \times 10 \times x^{-8}}$

21. The internal measures of a cuboidal room are 12 m × 8 m × 4 m. Find the total cost of white washing all four walls of a room, if the cost of white washing is Rs 5 per m^2. What will be the cost of white washing if the ceiling of the room is also white washed.

22. Find the values of the letters in the following:

$$\begin{array}{r} 4\,A \\ +\ 9\,8 \\ \hline C\,B\,3 \end{array}$$

SECTION – D

23. The digits of a two-digit number differ by 3. If the digits are interchanged, and the resulting number is added to the original number, we get 143. What can be the original number?

24. The population of a place increased to 54,000 in 2003 at a rate of 5% per annum
(i) Find the population in 2001.
(ii) What would be its population in 2005?
(iii) Write any two effects of high populations?

25. Use the Identity $(x + a)\,(x + b) = x^2 + (a + b)\,x + ab$ to find the following:
(i) 501×502
(ii) 95×103

26. Water is pouring into a cuboidal reservoir at the rate of 60 litres per minute. If the volume of reservoir is 108 m^3, find the number of hours it will take to fill the reservoir. What are the advantages of reservoir for farmer?

27. A train is moving at a uniform speed of 75 km/hour. (i) How far will it travel in 20 minutes? (ii) Find the time required to cover a distance of 250 km.

28. The following table gives the quantity of petrol and its cost.

No. of Litres of petrol	10	15	20	25
Cost of petrol in Rs	500	750	1000	1250

Plot a graph to show the data.

29. Write the following numbers in standard form.
(i) 0.000000564
(ii) 0.0000021
(iii) 21600000
(iv) 15240000

30. (a) Divide $z(5z^2 - 80)$ by $5z(z + 4)$
(b) Factorise the expressions and divide as directed: $(y^2 + 7y + 10) \div (y + 5)$